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No. XI.

FURNACE FOR TYPE-FOUNDERS.

The Sum of ***Five Pounds*** *was voted to Mr. W.* ***Levick****, No. 55 Great Ormond Street, for his Improved Furnace for Type-Founders ; a Model of which has been placed in the Society's Repository.*

The common type-founder's furnace is built against the wall, and has a common flue with a damper. The dimensions of the fireplace are from five to seven inches cube. The cast-iron pot holding the metal is let in to the top of the furnace, and there is a small door below through which the fuel is put in. The consumption of small coal by such a furnace in a day of twelve hours, is from 22 to 25 pounds, and the quantity of metal kept liquid thereby is about 8 pounds.

Mr. Levick's furnace is cylindrical, and stands quite detached from the wall: it has a descending flue, which, being no obstruction, three men can work commodiously at it at the same time. The fireplace is a cube of ten inches, and has a feeder on one side of the upper part, through which fuel is supplied to the amount of about 20 pounds of small coal in a day. The iron pot is divided by three partitions, each caster having an equal space, and its three compartments communicate by a small hole at the bottom of each. The saving thus occasioned, is stated by the candidate to be two-thirds of the fuel, and two furnaces out of three.

Fig. 1 is a section, and fig. 2 a top view. In fig. 3, the melting pot and iron cap are removed to shew the fireplace and flue. *a* is the ash-pit and air-hole, with a door *b*, by which the draft and consumption of fuel may be regulated. The fireplace *c* is surrounded with single bricks, made taper towards the centre, and long enough to reach from bottom to top; *d* is the descending portion

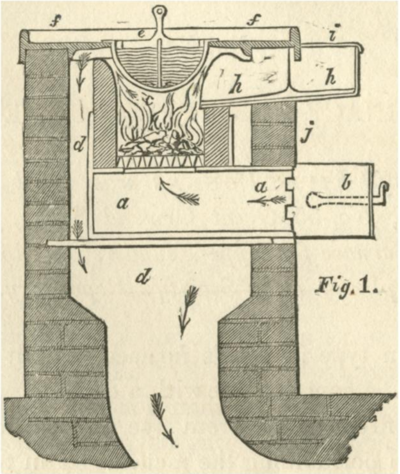

Fig. 1.

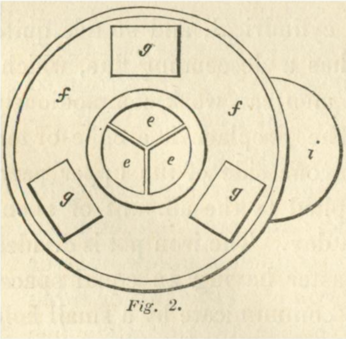

Fig. 2.

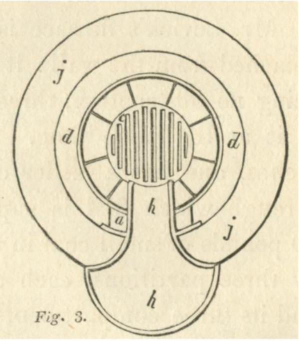

Fig. 3.

of the flue; *e* the melting-pot, placed in a hole in the iron cap *f*. This cap has a raised margin to retain any metal that may drop, and below is fitted well on to the brickwork. As this cap becomes hot, tiles *g g g* may be laid under the hands of the workmen; an iron fuel-box *h*, with a cover *i*, is mounted in the surrounding wall *j*; it has a spout extending to the fireplace, through which the fuel is poked into the fire.

No. XII.

VENTILATING EYE-SHADE.

The Thanks of the Society were voted to Mr. ALEXANDER ALEXANDER, *No.* 6 *High Street, Exeter, Optician, for his Ventilating Eye-Shade; one of which has been placed in the Society's Repository.*

THE common green-silk shade used by persons with weak eyes is made of pasteboard, and is fastened round the head by means of a riband at each extremity. Such a shade cannot be retained in its place unless it press against the forehead; the consequence of which is, that the air, warmed by contact with the face, collects beneath the shade, there being scarcely any space between it and the forehead through which it may escape. Thus the eyes, already in a weak and irritable state, are rendered worse and more relaxed by the hot air that is continually applied to them; whereas, if the shade were allowed to